

WHAT IS CLAIMED IS:

1. A method for manufacturing a piezoelectric resonator, comprising:
attaching a piezoelectric resonator element comprising a piezoelectric body having electrodes disposed thereon, to a plurality of leads which connect said piezoelectric resonator element mechanically to a supporting member and permit electrical connection thereof;
providing a gap between said supporting member and said piezoelectric resonator element; and
forming a connecting layer of a conductive resin between an electrode and a flat leading end portion of each of said leads, each said flat leading end portion being connected substantially in parallel with said electrode and having a substantially U-shaped edge which opens toward a leading end thereof,
said piezoelectric resonator element being attached to the substantially U-shaped edge, on a side of said piezoelectric resonator element which faces said leads, so that an edge of said piezoelectric resonator element on the side which faces said leads may be positioned on the substantially U-shaped edge.
2. The method for manufacturing a piezoelectric resonator according to claim 1, wherein forming said connecting layer comprises:
forming a fixing layer having a short setting time by coating a UV-setting type resin onto at least a part of the leading end portions of said leads and said piezoelectric resonator element; and
forming the connecting layer by injecting the conductive resin at least into the gap between said electrode and said leading end portions.
3. The method for manufacturing a piezoelectric resonator according to claim 2, said UV-setting type resin being coated onto a side of one lead facing an adjacent lead.
4. The method for manufacturing a piezoelectric resonator according to claim 1, further comprising, prior to connecting said leading end portions to said electrode, forming said connecting layer with the conductive resin coated onto said leading end portions or said electrode.
5. The method for manufacturing a piezoelectric resonator according to claim 1, further comprising forming a reinforcing layer with a conductive resin or a non-conductive resin coated so as to cover at least said connecting layer and the leading end portions of said leads.

6. The method for manufacturing a piezoelectric resonator according to claim 5, said conductive resin or non-conductive resin used in reinforcing having a higher viscosity than that of said conductive resin used in connecting.

7. A method for manufacturing a piezoelectric resonator unit comprising:
attaching a piezoelectric resonator element comprising a piezoelectric body having electrodes disposed thereon, to a plurality of leads which connect said piezoelectric resonator element mechanically to a supporting member and permit electrical connection thereof;

providing a gap between said supporting member and said piezoelectric resonator element;

forming a connecting layer of a conductive resin between an electrode and a flat leading end portion of said leads, each said flat leading end portion being connected substantially in parallel with said electrode having a substantially U-shaped edge which opens toward a leading end thereof;

inserting the piezoelectric resonator element connected to said supporting member into a hollow protector; and

sealing the piezoelectric resonator within said supporting member and said protector,

said piezoelectric resonator element being attached to the substantially U-shaped edge on a side facing said leads, so that an edge of said piezoelectric resonator element on the side facing said leads may be positioned on the substantially U-shaped edge.

8. A method for manufacturing a piezoelectric resonator unit according to claim 7, wherein forming said connecting layer comprises:

forming a fixing layer by coating a UV-setting type resin onto at least a part of the leading end portions of said leads and said piezoelectric resonator element; and

forming the connecting layer by injecting the conductive resin at least into the gap between said electrode and said leading end portions.

9. The method for manufacturing a piezoelectric resonator unit according to claim 8, said UV-setting type resin being coated onto a side of one lead facing an adjacent lead.

10. The method for manufacturing a piezoelectric resonator unit according to claim 7, prior to connecting said leading end portions to said electrode, said connecting layer being formed with the conductive resin coated onto said leading end portions or said electrode.

11. The method for manufacturing a piezoelectric resonator unit according to claim 7, further comprising forming a reinforcing layer with a conductive resin or a non-conductive resin coated so as to cover at least said connecting layer and the leading end portions of said leads..

12. The method for manufacturing a piezoelectric resonator according to claim 11, said conductive resin or non-conductive resin used in reinforcing having a higher viscosity than that of said conductive resin used in connecting.